Center of Excellence for Inflatable Composite Structures (CE-ICS)

Overview:

The **Center of Excellence for Inflatable Composite Structures (CE-ICS)** manages a textile technology process that creates structures, (referred to as air beams) that are extremely lightweight and require minimal storage space during transit. The technology was transferred from the Army to Air Force, Marine Corps, Navy and NASA. It was developed through both Government and Industry interaction.

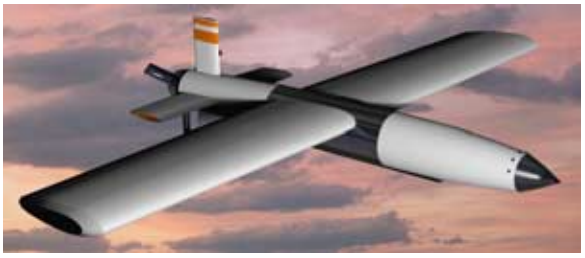
The technology has led to products that weigh 66% less then conventional metal items, take up less then 25% the volume when stored or shipped and cuts setup time by 60%.

Applications for this technology are extremely broad. These include arches to support tents, inflatable wheels and antenna's for space applications, stiffening edges for large cargo parachutes, fins for aircraft ejection seats, huge underwater beams to reduce wave heights during inter-vessel cargo transfer and ballistic protective systems for munitions stored in field ammo dumps.

Spin-offs from the manufacturing technology include low-cost rigid composite nose cones for missiles and the next generation chemical and biological agent resistant laminated fabric.

Two competing textile technologies were developed that produce high strength, 3 dimensional flexible structures capable of supporting applied loads when inflated with high-pressure fluids. Manufacturing technology was concurrently developed which provides a competitive industrial base capable of producing a wide array of products.

The objectives for the Center of Excellence are:
Capture Success of Airbeam Program;
Oversee and Guide Technology Proliferation;
Advance Technological Understanding;
Publish Technical Reports; Broaden Applications and Obtain Patents.



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Latest Version

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